ABSTRACT

A method and apparatus for optical odometry are disclosed which inexpensively facilitate diverse applications including indoor/outdoor vehicle tracking in secure areas, industrial and home robot navigation, automated steering and navigation of autonomous farm vehicles, shopping cart navigation and tracking, and automotive anti-lock braking systems. In a preferred low-cost embodiment, a telecentric lens is used with an optical computer mouse chip and a microprocessor. In a two-sensor embodiment, both rotation and translation are accurately measured.